



Launch Mission Execution Forecast

Mission: Falcon 9 NROL-108

Issued: 14 Dec 2020 / 0800L (1300Z)

Valid: 17 Dec 2020 / 0900 – 1200L (1400 – 1700Z)



Forecast Discussion: A weak frontal system will move into Central Florida today, bringing in clouds, but only a slight chance of rain. This boundary will linger in the area allowing a wave to develop on it Tuesday, leading to continued mostly cloudy conditions. On Wednesday, the wave will strengthen into a low-pressure area, increasing chances of rain and creating a few isolated thunderstorms. Overnight Wednesday into Thursday morning, strong high-pressure system moving east from southern Texas will finally push the whole system out of the area. Winds will turn northerly and become gusty along the Space Coast as cloud cover slowly clears through the day Thursday. The primary weather concern for Thursday is liftoff winds and the Thick Cloud Layer Rule associated with the lingering frontal cloudiness.

On Friday, cloud cover will be much diminished over the Spaceport, but gusty northeasterly winds will remain due to the strength of the high-pressure area. The primary weather concern Friday is liftoff winds.

Launch Day	Probability of Violating Weather Constraints						
	40%	Primary Concerns: Liftoff Winds, Thick Cloud Layer Rule					
	Weather Conditions					Additional Risk Criteria	
	Weather/Visibility: None / 7 mi.	Clouds				Upper-Level Wind Shear:	Moderate
	Temp/Humidity: 64-70°F / 90-75%	Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather:	Moderate
24-Hour Delay	Liftoff Winds (200'): 330° 17-22 mph	Stratocumulus	Scattered	3,000	7,000	Solar Activity:	Low
	Probability of Violating Weather Constraints						
	20%	Primary Concerns: Liftoff Winds					
	Weather Conditions					Additional Risk Criteria	
	Weather/Visibility: None / 7 mi.	Clouds				Upper-Level Wind Shear:	Moderate
	Temp/Humidity: 62-68°F / 65-55%	Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather:	Moderate
	Liftoff Winds (200'): 020° 17-22 mph	Stratocumulus	Few	2,000	4,000	Solar Activity:	Low
		Cirrostratus	Scattered	28,000	30,000		
Note: The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.							
Next Forecast Will Be Issued		15 Dec 2020					